

**Claims**

1. A method of representing motion of an object appearing in a sequence of images comprising deriving for each image a set of representative points  
5 representing the location of the object, deriving an approximate function representing the trajectory of a representative point in two or more of said sequence of images, and calculating an error value for said approximate function for the representative point for an image, characterised in that the error value is based on the change in area of the object as represented by the  
10 representative point and the area of the object with the representative point replaced by the respective approximate function value.
2. A method as claimed in claim 1 wherein the error value is based on the change in area in an image.  
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3. A method as claimed in claim 1 wherein the error value is based on the change in area in a plurality of images.
4. A method as claimed in any preceding claim wherein a function  
20 approximation is derived for each co-ordinate of a representative point.
5. A method as claimed in any preceding claim wherein a function approximation is derived for each representative point.

6. A method as claimed in any preceding claim wherein a function approximation is done for representative points independently.
- 5 7. A method as claimed in any of claims 1 to 5 wherein a function approximation is done for two or more vertices in conjunction.
8. A method as claimed in any preceding claim wherein the error value for an image is based on a function of the number of pixels that are in the modified object outline replacing a representative point by the function approximation value of the representative point but not the original outline and the number of pixels that are in the original outline but not in the modified outline.
- 10 9. A method of identifying selection of an object in an image in a sequence of images, wherein the object motion has a representation derived using a method as claimed in any one of claims 1 to 8, the method comprising identifying a selected region of the image, determining the location of said object in said image using said motion descriptor, and comparing it with the selected region to determine if said object is selected.
- 15 20 10. A method of searching for sequences of images by processing signals corresponding to images, the method comprising inputting a query object

motion, deriving a representation of the query object motion, comparing the representation with representations derived using a method as claimed in any one of claims 1 to 8, and selecting and displaying those sequences of images for which the representations indicate a degree of similarity to the query.

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11. An apparatus adapted to implement a method as claimed in any preceding claim.

12. A computer program for implementing a method as claimed in any  
10 one of claims 1 to 10.

13. A computer system programmed to operate according to a method as claimed in any one of claims 1 to 10.

14. A computer-readable storage medium storing computer-executable  
15 process steps for implementing a method as claimed in any one of claims 1 to 10 or storing a program as claimed in claim 12.

15. A descriptor of motion of an object in a sequence of images derived by  
20 a method according to any one of claims 1 to 8.